

REMARKS

Claims 1-59 were presented for examination. The instant amendment cancels claims 22-31, 45, and 58 without prejudice. Thus, claims 1-21, 32-44, 46-57, and 59 remain pending in the present application upon entry of the instant amendment. Claims 1, 12, 13, 32, and 46 are independent.

Claims 1-11, 13-21, 23-30, 32-43, 45-57, and 59 were rejected under 35 U.S.C. §102 over U.S. Patent No. 6,411,865 to Qin et al. (Qin). Claims 12, 22, 31, 44, and 58 were rejected under 35 U.S.C. §103 over Qin in view of U.S. Patent No. 5,875,088 to Matsko et al. (Matsko).

Independent claim 1 has been clarified to recite that the “protection matrix comprises a matrix of protection coefficients used by said zone protective function (emphasis added)”.

Qin merely discloses a complex graph-based system for selecting the configuration of the zones, but does not use a matrix of protection coefficients as claimed in the zone protection.

Rather, Qin discloses that the microprocessor-based relays have common protection functions: bus protection, breaker failure protection and protection zone selection. Zone selection is a basic function in both bus and breaker failure protection schemes. As indicated above, accurate protection zone selection ensures that the protective relay operates according to Kirchhoff's current law in choosing input currents for differential protection. Zone selection also determines the particular circuit breakers to trip in the event of a bus fault or an associated breaker failure. Graph-type operation is a tool which can be used for step-by-step, graphical-type hand manipulation of the bus arrangement and provides a comprehensible picture of the power system station and its operation (emphasis added). See col. 7, lines 60-65.

Thus, Qin merely provides a tool to select the zone configuration, but, once selected, uses the common protection functions resident in the relay. Therefore, clarified claim 1 is not disclosed or suggested by Qin.

Matsko not asserted by the Office Action, nor does Matsko disclose or suggest the matrix of protection coefficients now claimed.

Claim 1 is therefore believed to be in condition for allowance. Claims 2-11 are also believed to be in condition for allowance for at least the reason that they depend from the aforementioned claim 1. Reconsideration and withdrawal of the rejection to claims 1-11 are respectfully requested.

Claim 12 has been amended in to independent format, namely to include elements of original claim 1.

Applicants respectfully traverse the rejection of claim 12.

Claim 12 requires, in pertinent part, the step of "determining a dynamic delay time for opening said at least one of the power switching devices (emphasis added)".

The Office Action acknowledges, with respect to claim 12, that Qin does not disclose a dynamic delay. Rather, the Office Action asserts that Matsko discloses a dynamic delay.

First, Applicants respectfully submit that Matsko merely discloses a variable delay time and, not, the claimed dynamic delay time.

Specifically, Matsko discloses that in coordinating the delay times and performance characteristics of the circuit interrupters associated with an electrical distribution system, a time-trip curve of the desired current response characteristics of the circuit interrupter over time may be employed. See col. 1, lines 27-45. Applicants

submit that this time-trip varies along the defined curve. However, the delay time is not dynamic and, thus, Matsko fails to disclose or suggest determining a dynamic delay time as claimed.

Further, even if one was to assume that Matsko discloses a dynamic delay time (which it does not), Applicants submit that there is simply no motivation to combine Qin and Matsko.

As the source of motivation, the Office Action asserts that it would have been obvious to provide the delay time of Matsko to improve the zone interlocks of Qin. However, Qin is directed to a graph based system for determining the zones of protection. One skilled in the art looking to improve how to determine zones of protection as in Qin, would simply not look to Matsko, which is directed to circuit breakers that interlock with another circuit breaker. Improving the performance of the zone interlocks themselves, other than how to select the zones, is simply not discussed by Qin or Matsko.

Moreover, even if one was to assume that there is was a motivation to combine Qin and Matsko (which there is not), Applicants further submit that there is no expectation that one could successfully combine Matsko with Qin.

The requirement for a determination of obviousness is that "both the suggestion and the expectation of success must be founded in the prior art, not in applicant's disclosure" (emphasis added). *In re Dow Chem.*, 837 F.2d 469, 473, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988). An Examiner thus cannot base a determination of obviousness on what the skilled person in the art might try or find obvious to try. Rather, the proper test requires determining what the prior art would have led the skilled person to do, with a reasonable expectation of success.

In the instant case, Matsko generally discusses breakers that have a set time-trip curve. Applicants submit that there is no reasonable expectation that one skilled in the

art could successfully take the set time-trip curves of Matsko, then modify these set curves into the claimed “dynamic delay time”, and then combine this modified time with the graph-based system of selecting zones of Qin to result in the combination recited by claim 12.

Claim 12 is therefore believed to be in condition for allowance. Reconsideration and withdrawal of the rejection to claim 12 are respectfully requested.

Independent claim 13 has been amended to include elements of dependent claim 22, which has been cancelled. Thus, claim 13 now requires, in part, the step of “determining a dynamic delay time for opening said at least one of the power switching devices (emphasis added)”.

As discussed in detail above with respect to claim 12, Applicants respectfully submit that the time-trip curve of Matsko is not dynamic and, thus, Matsko fails to disclose or suggest determining a dynamic delay time as claimed. Further, Applicants submit that there is simply no motivation to combine and no expectation of success in combining Qin and Matsko.

Claim 13, as amended, is therefore believed to be in condition for allowance. Claims 14-21 are also believed to be in condition for allowance for at least the reason that they depend from the aforementioned claim 13. Reconsideration and withdrawal of the rejection to claims 13-21 are respectfully requested.

Independent claim 32 has been amended, similar to claim 1 discussed above, to recite that the control processing unit “utilizes a protection matrix to perform said zone protective function, said protection matrix being defined at least in part by said characteristics of said zone of protection, and wherein said protection matrix comprises a matrix of protection coefficients used by said zone protective function (emphasis added)”.

Again, Qin merely discloses a complex graph-based system for selecting the configuration of the zones. As such, Qin merely provides a tool to select the zone configuration, but, once selected, uses the common protection functions resident in the relay.

Applicants submit that the common protection functions of Qin do not disclose or suggest the protection matrix that comprises "a matrix of protection coefficients used by said zone protective function" as in claim 32. Therefore, amended claim 32 is not disclosed or suggested by Qin.

Matsko not asserted by the Office Action, nor does Matsko disclose or suggest the matrix of protection coefficients now claimed.

Claim 32 is therefore believed to be in condition for allowance. Claims 33-44 are also believed to be in condition for allowance for at least the reason that they depend from the aforementioned claim 32. Reconsideration and withdrawal of the rejection to claims 32-44 are respectfully requested.

Independent claim 46 has been amended to include elements of original claim 58, which has been cancelled. Thus, claim 46 recites that the control processing unit "determines a dynamic delay time for opening at least one of said power switching devices (emphasis added)."

As discussed in detail above with respect to claim 12, Applicants respectfully submit that the time-trip curve of Matsko is not dynamic and, thus, Matsko fails to disclose or suggest a control processing unit that determines a dynamic delay time as claimed. Further, Applicants submit that there is simply no motivation to combine and no expectation of success in combining Qin and Matsko.

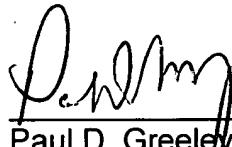
Claim 46, as amended, is therefore believed to be in condition for allowance. Claims 47-57 and 59 are also believed to be in condition for allowance for at least the

reason that they depend from the aforementioned claim 46. Reconsideration and withdrawal of the rejection to claims 46-57 and 59 are respectfully requested.

In view of the above, it is respectfully submitted that the present application is in condition for allowance. Such action is solicited.

If for any reason the Examiner feels that consultation with Applicants' attorney would be helpful in the advancement of the prosecution, the Examiner is invited to call the telephone number below.

Respectfully submitted,



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